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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/680,323	10/06/2000	Kinya Odagiri	0675-31	9127

22204 7590 07/17/2002

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EXAMINER

TAMAI, KARL I

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 07/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/680,323

Applicant(s)

ODAGIRI ET AL.

Examiner

Tamai IE Karl

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 5/6/02 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on 5/6/02 have been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance. The objection to the drawings have been withdrawn.

Specification

1. The substitute specification filed 5/6/02 has been entered into the file wrapper.
2. The objection to the specification for failing to provide proper antecedent basis for the stator coil substrate is withdrawn.

Claim Rejections - 35 USC § 112

3. Claims 1-7 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Claims 1-7 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification does not enable or have a full, clear, concise and exact written description of the rotor magnets positioned around the periphery of the rotor fan on the surface of the heat plate. Particularly, there is no written description of the rotor magnets positioned on the surface of the heat plate, as claimed in the amended claim 1.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the external surface"(which external surface is "the" external surface), "the inner portion"(which inner portion is "the" inner portion), and "the object to be cooled". Claim 3 recites the limitation "the stator unit". There is insufficient antecedent basis for these limitations in the claims.

6. The 35 USC 112, second paragraph rejection of claims 4-6 because of the broad/narrow range limitation is withdrawn. The 35 USC 112, second paragraph rejection of claim 2 because of antecedent basis is withdrawn.

Claim Objections

7. Claim 7 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim 7 depends from another multiple dependent claim (6 which depends from 3 which is a multiple dependent claim. See MPEP § 608.01(n).

Accordingly, the claim 7 not been further treated on the merits.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang(US 5,583,746) and Saito(US 5,979,541). Wang teaches a thin motor characterized by having a heat plate 10 supporting the rotor fan 40 in a central portion thereof and whose contact surface matches the item to be cooled 50. The fan having blades with a gentle arc(see figure 2). The heat plate including the stator and the heat plurality of radiator plates are secured together by diagonally opposed bolts 14, 15. Wang does not teach the fan having a two step inverted saucer shape, a raised central portion of the heat plate, a stator coil substrate, and the rotor blades pushing air in the radial direction. Saito teaches a fan motor with a central raised portion to support the stator coil substrate 63,64 and shaft. Saito teaches the rotor blades forcing the air in the radial direction of the Saito teaches a fan with an outer radial step 722 that extends near the heat radiator fins 32 and an inner radial fan 723 that mates around the lid 4. The rotor fan and the two step blades forming an inverted saucer over the stator. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the cooling device of Wang with the motor of Saito to improve the cooling effect of the fan and prevent extraction of the fan through the intake aperture.

10. Claims 3/1 and 6/3/1 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang(US 5,583,746) and Saito(US 5,979,541). Wang and Saito teach every aspect of the invention except the spacers being heat conducting material, the heat plate being a material with excellent thermal conductivity(precious metal, copper) or partially diamond crystal, and the heat sink being aluminum or copper. Wang teaches spacers 20 between the fins 30, but does not specify the material of the spacers or the fins. Saito teaches the heat plate and fins being copper(col. 5, line 13). It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the cooling device of Wang with the spacers being a heat conducting material, with the heat plate being copper, and the heat sink to be copper to allow the heat from the CPU to be drawn into the cooling fins 30 and dissipated in the air flow, as taught by Saito.

Allowable Subject Matter

11. Claim 2, 3/2, 5, and 6/3/2 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

12. Applicant's arguments filed 5/6/02 have been fully considered but they are not persuasive.

The Applicant's argument that there is no motivation to combine Wang and Saito is not persuasive. Wang teaches a cooling structure for a CPU 50, but does not teach the specifics of the motor. Saito teaches a motor for a fan for cooling the CPU which provides improved cooling efficiencies and the design prevents the extraction of the rotor, see column 2, lines 37-43. The rejection is proper and maintained. The Applicant's argument that there is no reasonable expectation for success is not persuasive because it is conclusory and unsupported. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). The combined teaching clearly show a cooling structure for the CPU with a rotor to provide increased cooling efficiencies, as set forth in the prior Office Action.

The Applicant's arguments regarding the "gentle arc" is not persuasive. Both Wang and Saito show each of the fan blades having the same gentle arcs, see figs 2 and 7 respectively. The Applicant's argument regarding the "inner step" is not persuasive. Saito teaches an inner radial fan 723 that mates around the lid 4. The Applicant's argument regarding the air circulation by the fan is not persuasive. Saito figure 1, clearly shows the air coming in the intake opening in plate 4 and moving out radially. The Applicant's argument regarding the outer step extending around a raised portion of the heat plate is not persuasive. Saito teaches the outer portion of the fan

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722 extending around the raised portion of the heat plate 35 towards the CPU and near the cooling fins 32. The Applicant's argument regarding the inverted saucer is not persuasive. Saito teaches a rotor 71 that is an inverted saucer. The rejections are proper and maintained.

Conclusion

Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai whose telephone number is (703) 305-7066.


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The examiner can be normally contacted on Monday through Friday from 8:00 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Nestor Ramirez, can be reached at (703)308-1371. The facsimile number for the Group is (703)305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Karl I Tamai
PRIMARY PATENT EXAMINER
July 15, 2002


KARL TAMAI
PRIMARY EXAMINER